

## Quick Facts

### About... Group A Streptococcal (GAS) Disease (invasive disease)

#### What is Group A Streptococcal (GAS) disease?

GAS disease causes many types of illnesses from bacteria called group A streptococcus (strep). These bacteria are commonly found in the throat and on the skin and usually do not cause illness. Some illnesses caused by GAS, like strep throat and impetigo, are quite common and easily treated. Scarlet fever is also caused by GAS. Other more severe diseases caused by GAS are rare but do require immediate medical attention, as they can cause life-threatening illness.

#### What are the signs of being sick with severe GAS disease?

Severe, life-threatening GAS disease occurs when the bacteria get into parts of the body where bacteria are usually not found, such as blood, muscle, or the lungs. These types of infections are called "invasive disease." Three of the most severe forms of invasive GAS disease are:

- Necrotizing fasciitis (sometimes called "flesh-eating bacteria") is an infection that destroys muscles, fat, and skin tissue. This can happen when a wound becomes infected with GAS. The area around the wound is usually red, swollen, and painful. Other symptoms can include fever, fluid-filled blisters on the skin, and painful and swollen skin and muscles.
- Streptococcal Toxic Shock Syndrome (STSS) is an infection that causes body organs (such as kidney, liver, and lungs) to stop working because of poisons produced by the GAS bacteria. Symptoms can include fever; headache; vomiting; muscle aches; confusion; rash; breathing problems; and, if the skin is infected, severe pain at the infected site. It also causes blood pressure to drop quickly. STSS is not the same as "toxic shock syndrome," which is frequently associated with tampon usage.
- Streptococcal bacteremia/sepsis occurs when GAS infects the bloodstream. Bacteremia/Sepsis is an uncommon complication which usually follows strep throat or skin infections from GAS. Symptoms can include fever, low blood pressure, fatigue, and muscle weakness.

People with any of these infections become very sick and are usually diagnosed after being admitted to the hospital.

#### How is GAS spread?

GAS is spread through direct contact with the fluids from the nose or throat of persons who are infected, or by hands that have GAS on them. Crowded settings, such as dormitories, barracks, child-care centers, or correctional facilities, make it easier for these germs to spread. Spread may also occur by contact with infected wounds or sores on the skin. People who have GAS in their throats and noses, but are not sick, are less likely to pass GAS bacteria to others.

#### How is invasive GAS disease diagnosed?

If you suspect GAS disease, you should see your health care provider right away. Your health care provider may collect blood or samples from other sites of infection (i.e., wounds, sores on the skin) to see if group A strep bacteria are present. Test results will not be available until 24-48 hours following the test.

#### How is the disease treated?

GAS infections can be treated with many different types of antibiotics. Early treatment may reduce the risk of complications or death from invasive GAS disease. However, even the best medical care does not prevent death in every case. For those with severe illness, supportive care in an intensive care unit is needed. For persons with necrotizing fasciitis, surgery is often needed to remove damaged tissue.

**Who is at highest risk for getting the disease?**

Very few people who come in contact with GAS will actually develop invasive GAS disease. Although healthy people can get invasive GAS disease, people with chronic illnesses, e.g., cancer and diabetes; those who use certain medications, e.g., steroids; or people undergoing kidney dialysis have a higher risk of developing GAS. Children with chickenpox are also at increased risk for severe group A strep infections.

**Can GAS disease be prevented?**

As with most infectious diseases, the risk for GAS infection can be reduced by good personal hygiene. Proper hand cleaning is the best way to prevent all types of GAS infection. It is important to clean your hands regularly, especially after coughing or sneezing, and before and after caring for a sick person. It is also very critical to teach children to clean their hands often and properly, using soap and water or an alcohol-based hand sanitizer. All wounds should be kept clean and watched for signs of redness, swelling, drainage, and pain at the wound site. A person with signs of an infected wound, especially if fever is involved, should seek medical care right away. People diagnosed with strep throat should stay home from work, daycare, or school for 24 hours after beginning antibiotic therapy. Health care providers may recommend that people who are exposed to someone with invasive GAS take antibiotics to help prevent infection.

**Is there a vaccine that can prevent this disease?**

No vaccine is currently available to prevent GAS disease.

For additional information on group A streptococcal disease, please visit the Centers for Disease Control and Prevention (CDC) Web site at:

[http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm)

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